



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,195	07/22/2005	Dieter Teppke	U198US(PCT)	5501
20469 7590 08/07/2007 KOHLER SCHMID MOEBUS RUPPMANNSTRASSE 27 D-70565 STUTTGART, GERMANY			EXAMINER YOO, REGINA M	
			ART UNIT 1744	PAPER NUMBER
			MAIL DATE 08/07/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/543,195	TEPPKE, DIETER	
	Examiner	Art Unit	
	Regina Yoo	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 22-43 is/are pending in the application.
- 4a) Of the above claim(s) 22-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 34-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/22/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of Group II in the reply filed on 6/11/07 is acknowledged. The traversal is on the ground(s) that due to new amendments to the independent claims 22 and 34, the new corresponding special technical features are not disclosed by any prior art. This is not found persuasive because the new corresponding special technical features are:

- (a) subjecting a closed cryostat to a defrosting phase;
- (b) introducing a vaporous disinfectant into the closed cryostat chamber;
- (c) waiting an effective time for action of the disinfectant;
- (d) generating a temperature difference between the microtome and cryostat chamber; and
- (e) discharging disinfectant deposited in a colder region of the cryostat.

Tabone (FR 2705587) discloses a device (see Figures 1-2) comprising:

- (a) means (4-6, V) for subjecting a closed cryostat to a defrosting phase;
- (b) means (12-15) for introducing a vaporous disinfectant into the closed cryostat chamber;
- (c) means (7, 8) for waiting an effective time for action of the disinfectant;
- (d) means (4-6, V and 16) for generating a temperature difference between the microtome (9) and cryostat chamber (1); and

Art Unit: 1744

(e) means (18) for discharging disinfectant deposited in a colder region of the cryostat,

all of which performs or is capable of performing said operations. As all the limitations of the corresponding special technical features are disclosed by Tabone ('587), the groups of applicant's invention lack a single general inventive concept and thus, there is a lack of unity of invention.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 34-38, 41 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Tabone (FR 2705587).

As to Claim 34, Tabone ('587) discloses a device for disinfecting a cryostat (1, 2) having a microtome (9) (see Figures 1 and 2), the device comprising:

means (4, 6 and V) for subjecting a closed cryostat chamber (1) to a defrosting phase (see last 7 lines of page 2 through 1<sup>st</sup> line of page 3, as well as lines 26-29 of page 3 of English translation of the Description);

means (12, in association with 13-15) for introducing a vaporous disinfectant (see page 1, lines 23-28 of the English translation, particularly "a fog... of a suitable inhibiting

Art Unit: 1744

agent" which is deemed to indicate a vaporous state of the disinfectant) into said closed cryostat chamber (1);

means (7, 8) for waiting an effective time for action of the disinfectant (see entire document, particularly page 3, lines 19-22, 35-36 and 42-44 of the English translation);

means (16) is capable of generating, subsequent to elapse of said effective time, a temperature difference between said microtome (9) and said cryostat chamber (1);  
and

means (18) for discharging disinfectant deposited in a colder region of said cryostat chamber (1) (where the lowest part of the chamber 1 shaped as funnel leading to the drain 18 is capable of being a colder region when the heater 16 placed under the microtome is operated to heat the microtome to a higher temperature than the temperature of the interior of the cryostat, under control of the evaporator 4).

As to Claim 35, Tabone ('587) discloses that the device (see Figures 1-2) comprises a microtome (9) in said cryostat chamber (1), a refrigerator (4), and a control (8) communicating with said disinfectant introduction means (12-14) and with said effective time waiting means (a part of control 8), wherein said control (8) generating said temperature difference in said cryostat chamber (1) through heating and/or cooling, wherein a collecting device (5 and the funnel region at the lowest portion of chamber 1 connected with 18) is disposed in a colder region to remove deposited disinfectant (where the location of the collecting device 5, as well as the funnel region leading to 18,

Art Unit: 1744

is located in a colder region when the refrigerator 4 is operating/cooling the interior of the chamber and heater 16 is operating to heat microtome).

As to Claim 36, Tabone ('587) discloses that the device (see Figures 1-2) wherein said control (8) is designed to reduce a temperature of said refrigerator (4) of the cryostat (1) in a cooling phase (see page 2, lines 19-21 and page 4, lines 3-7 of the English translation which demonstrates control 8 initiating cooling; where the refrigerator/evaporator is capable of operating to below 0°C after said effective time until at least a majority of disinfectant has deposited on said refrigerator 4), said refrigerator (4) being subsequently thawed (by switching the mode of refrigerator/evaporator 4 –by flowing gas in reverse direction- to provide heat instead) to discharge disinfectant from said cryostat chamber (1) using said collecting device (5, the funnel region at the lowest portion of chamber 1 connected with 18) (disinfectant from 5 will discharge when the collected disinfectant overflows into the chamber 1, 2 to the collection device (the funnel region at the lowest portion of chamber 1 connected with 18) or when 5 possesses a draining hole, and discharges out of the cryostat chamber 1 through 18).

As to Claim 37, Tabone ('587) discloses that the device (see Figures 1-2) wherein said microtome (9) has a heater (16), and said control (7, 8) is designed to heat said microtome (9) after said effective time (see page 3, lines 35-44 of English translation wherein the “new rise in the temperature” is also effected by heater 16, in turn heating microtome 9, as seen in page 3, lines 30-32).

As to Claim 41, Tabone ('587) discloses that the device (see Figures 1-2) wherein said disinfectant introduction means (12-15) comprises a disinfectant supply container (15).

As to Claim 43, Tabone ('587) discloses that the device (see Figures 1-2) wherein said collecting device (5, 18) discharges liquid (see Figures 1-2, which is capable of discharging liquid that is dripping from said refrigerator 4), out of said cryostat chamber (1) via an outlet (see Figure 2, the outlet is the connection of the 1 and 2 to the drain 18).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 38 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tabone (FR 2705587).

As to Claim 38, Tabone ('587) disclose that the device (see Figures 1-2) wherein said refrigerator (4) also acts as a heater (see last 7 lines of page 2 through 1<sup>st</sup> line of page 3, as well as lines 26-29 of page 3 of English translation of the Description) and said control (8) is designed to switch on said heater (4) which is capable of accelerating thawing, and is deemed that a separate heater in the device configuration of Tabone is unnecessary to achieve thawing.

However, it would have been obvious to one of ordinary skill in this art at the time of invention to provide a separate heater in combination with the refrigerator/heater 4 in the device of Tabone in order to further accelerate thawing.

7. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tabone (FR 2705587) as applied to claim 35 above, and further in view of Krainiak (5711705).

Tabone ('587) is relied upon for disclosure described in the rejection of claim 35 under 35 U.S.C. 102(b).

While Tabone ('587) discloses that the means (12-15) for introducing a vaporous disinfectant (see rejection of claim 1) using a pump (14), Tabone ('587) does not appear to specifically teach that a blower is used for introducing the disinfectant into said cryostat chamber.

It was well known in the art at the time of invention to utilize a blower to distribute vaporized disinfectant. Krainiak ('705) exemplifies a device wherein a blower (31) is



used to convey the vaporized disinfectant (36) into a chamber (12) in order to decontaminate surfaces within the enclosure (see Col. 2, lines 33-43 and Col. 5, lines 1-5). It would have been obvious to one of ordinary skill in this art at the time of invention to provide a blower in place of the pump in the device of Tabone in order to deliver vaporized disinfectant as exemplified by Krainiak.

Thus, Claim 39 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Tabone ('587) and Krainiak ('705).

8. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tabone (FR 2705587) as applied to claim 35 above, and further in view of Lin (6589481).

Tabone ('587) is relied upon for disclosure described in the rejection of claim 35 under 35 U.S.C. 102(b).

While Tabone ('587) discloses that a fog of disinfectant is supplied into the cryostat chamber, Tabone ('587) does not appear to specifically teach that ultrasound is used to vaporize the disinfectant as a part of the disinfectant introduction means.

It was well known in the art at the time of invention to vaporizing disinfectant using ultrasound. Lin ('481) exemplifies a device wherein the vaporized disinfectant (16) is produced using ultrasound (48) in a tank (40) containing the disinfectant (16) (see Col. 11, lines 42-58). It would have been obvious to one of ordinary skill in this art at the time of invention to provide an ultrasonic transducer in the device of Tabone in order to generate vaporized disinfectant as exemplified by Lin.

Thus, Claims 39-40 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Tabone ('587) and Lin ('481).

9. Claim 42 is rejected under 35 U.S.C. 103(a) as obvious over Tabone (FR 2705587).

Tabone ('587) is relied upon for disclosure described in the rejection of claim 41 under 35 U.S.C. 102(b).

While Tabone ('587) discloses a tank (15) containing "inhibiting agent" (which is deemed to be a disinfectant as the inhibiting agent is utilized for decontamination) located "advantageously fixed on the side of the cryostat" (page 2, lines 39-40) (see Figure 1), Tabone ('587) does not appear to specifically teach that there is a valve for controlling a disinfectant level.

It was well known in the art at the time of invention to provide a valve in a storage tank for refill/venting purposes. It would have been obvious to one of ordinary skill in this art at the time of invention to provide a valve on the tank of Tabone in order to ensure that there is sufficient amount of disinfectant in the tank by providing capability to refill the tank so that the cryostat chamber will be properly decontaminated.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Yoo whose telephone number is 571-272-6690. The examiner can normally be reached on Monday-Friday, 9:30 am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RY



GLADYS JR. CORCORAN  
SUPERVISORY PATENT EXAMINER